

PTO/SB/01 (08-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| | | |
|---|--------------------------|---|
| DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) | Attorney Docket Number | 2003-IP-010346U1 |
| | First Named Inventor | Larry J. Buchanan |
| | COMPLETE IF KNOWN | |
| | Application Number | 10/727,454 |
| | Filing Date | 12/4/2003 |
| | Art Unit | |
| <input type="checkbox"/> Declaration Submitted With Initial Filing | OR | <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required) |
| Examiner Name | | |

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method of Optimizing Production of Gas from Subterranean Formations

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 12-4-2003 as United States Application Number or PCT International

Application Number 10/727,454 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

| Prior Foreign Application Number(s) | Country | Foreign Filing Date (MM/DD/YYYY) | Priority Not Claimed | Certified Copy Attached? | |
|--|---------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | | Yes | No |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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DECLARATION — Utility or Design Patent Application

| | | | | | |
|---|--|---------------------------|---|---|--------------------|
| Direct all correspondence to: <input type="checkbox"/> Customer Number: <input type="text"/> | | | | OR <input checked="" type="checkbox"/> Correspondence address below | |
| Name Halliburton Energy Services - ATTN: Robert A. Kent | | | | | |
| Address P.O. Box 1431 | | | | | |
| City Duncan | | State OK | | ZIP 73536-0440 | |
| Country USA | | Telephone 580-251-3125 | | Fax 580-251-3917 | |
| I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. | | | | | |
| NAME OF SOLE OR FIRST INVENTOR: | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | |
| Given Name (first and middle [if any]) Larry J. | | | Family Name or Surname Buchanan | | |
| Inventor's Signature <i>Larry J. Buchanan</i> | | | Date 2-4-04 | | |
| Residence: City Flower Mound | | State TX | Country USA | | Citizenship USA |
| Mailing Address 1905 Haversham Drive | | | | | |
| City Flower Mound | | State TX | | ZIP 75022 | Country USA |
| NAME OF SECOND INVENTOR: | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | |
| Given Name (first and middle [if any]) S. Dana | | | Family Name or Surname Weida | | |
| Inventor's Signature <i>Shirley D. Weida</i> | | | Date 1/22/04 | | |
| Residence: City Carrollton | | State TX | Country US | | Citizenship USA |
| Mailing Address 1016 Hunters Creek Drive | | | | | |
| City Carrollton | | State TX | | ZIP 75007 | Country USA |
| <input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto. | | | | | |

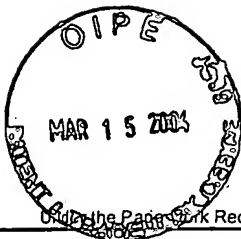
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DECLARATION**ADDITIONAL INVENTOR(S)
Supplemental Sheet**Page 1 of 1

| | | | |
|---|-------|---|-----|
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name (first and middle (if any)) | | Family Name or Surname | |
| Don P. | | Russell | |
| Inventor's Signature <i>Don P. Russell</i> | | Date <i>2-10-04</i> | |
| Residence: City | Plano | State | TX |
| Country | USA | Citizenship | US |
| Mailing Address 4701 Charles Place, Apt. 1512 | | | |
| Mailing Address | | | |
| City | Plano | State | TX |
| Zip | 75093 | Country | USA |
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name (first and middle (if any)) | | Family Name or Surname | |
| | | | |
| Inventor's Signature | | Date | |
| Residence: City | | State | |
| Country | | Citizenship | |
| Mailing Address | | | |
| Mailing Address | | | |
| City | | State | |
| Zip | | Country | |
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name (first and middle (if any)) | | Family Name or Surname | |
| | | | |
| Inventor's Signature | | Date | |
| Residence: City | | State | |
| Country | | Citizenship | |
| Mailing Address | | | |
| Mailing Address | | | |
| City | | State | |
| Zip | | Country | |

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Larry J. Buchanan, et al

Application No./Patent No.: 10/727,454 Filed/Issue Date: 12/4/2003

Entitled: Method of Optimizing Production of Gas from Subterranean Formations

Halliburton Energy Services, Inc., a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by percentage) of its ownership interest is _____ %
in the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.
3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

3-10-2004
Date
580-251-3125
Telephone number

Robert A. Kent
Typed or printed name
Robert A. Kent
Signature
Senior Counsel
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

ASSIGNMENT

Whereas, I/We, **Larry J. Buchanan** of Denton County, Carrollton, Texas, **S. Dana Weida** of Denton County, Carrollton, Texas, and **Don P. Russell** of Denton, Carrollton, Texas, have invented "**Method of Optimizing Production of Gas from Subterranean Formations**" for which I have made application for Letters Patent of the United States; and

Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, Texas 77072 is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We, by these presents do sell, assign and transfer and convey unto HALLIBURTON ENERGY SERVICES, INC., its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application serial number **10/727,454** filed on **12/4/2003**, and any divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefor; said invention, application and any and all Letters Patent issuing therefor to be held and enjoyed by HALLIBURTON ENERGY SERVICES, INC., for its own use and behoof, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention.

And I do further agree to communicate to HALLIBURTON ENERGY SERVICES, INC., its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any interference or other litigation.

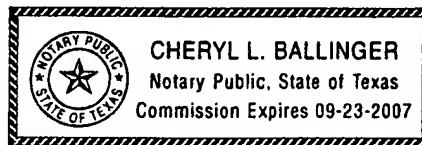
Executed this 4th ^{February} day of ~~January~~, 2004, at Carrollton, Denton County, Texas, U.S.A.

Larry J. Buchanan
Signature

STATE OF TEXAS)
)
COUNTY OF ~~DENTON~~ ^{Dallas}) ss

Before me personally appeared said **Larry J. Buchanan** and acknowledged the foregoing instrument to be his free act and deed this 4th day of ^{February} ~~January~~, 2004.

Cheryl L. Ballinger
(Notary)



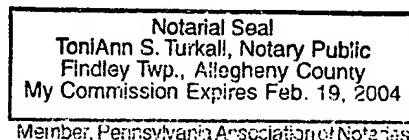
Executed this 23rd day of January, 2004, at Carrollton, Denton County, Texas, U.S.A.

S. Dana Weida
Signature

^{Pennsylvania}
STATE OF ~~TEXAS~~)
)
COUNTY OF ~~DENTON~~ ^{Allegheny}) ss

Before me personally appeared said **S. Dana Weida** and acknowledged the foregoing instrument to be his free act and deed this 23rd day of January, 2004.

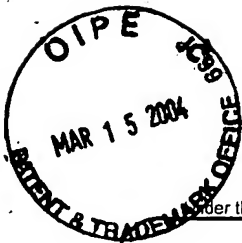
ToniAnn S. Turkall
(Notary)




Signature

Cheryl L. Ballenger
(Notary)





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POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

| | |
|------------------------|--------------------------|
| Application Number | 10/727,454 |
| Filing Date | 12/4/2003 |
| First Named Inventor | Larry J. Buchanan, et al |
| Title | Method of Optimizing |
| Art Unit | |
| Examiner Name | |
| Attorney Docket Number | 2003-IP-010346U1 |

I hereby appoint:

☐ Practitioners at Customer Number

Place Customer
Number Bar Code
Label here

OR

☒ Practitioner(s) named below:

| Name | Registration Number |
|--------------|---------------------|
| See attached | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer Number.

Place Customer
Number Bar Code
Label here

OR

☐ Firm or
Individual Name

| | |
|-----------|-------|
| Address | |
| Address | |
| City | State |
| Country | Zip |
| Telephone | Fax |

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

| | |
|-----------|-----------------------|
| Name | Robert A. Kent |
| Signature | <i>Robert A. Kent</i> |
| Date | 3-10-2004 |
| Telephone | 580-251-3125 |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Please type a plus sign (+) inside this box → ☐

PTO/SB/02C (3-87)

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Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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DECLARATION

REGISTERED PRACTITIONER INFORMATION (Supplemental Sheet)

| Name | Registration Number | Name | Registration Number |
|--|------------------------|------------------------------|------------------------|
| Halliburton Energy Services, Inc. Practitioners | | Baker Botts Practitioners | |
| William E. Shull | 29,438 | Mitchell D. Lukin | 30,772 |
| William M. Imwalle | 35,904 | Carey C. Jordan | 47,646 |
| Robert A. Kent | 28,626 | Iona Kaiser | 53,086 |
| Craig W. Roddy | 36,256 | | |
| John W. Wusternberg | 35,415 | | |

Estimated Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20501. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20501.**

Declaration — Registered Practitioner Information (Supplemental Sheet) (PTO/SB/02C)(1-1.4)